



STATE OF TENNESSEE  
DEPARTMENT OF ENVIRONMENT AND CONSERVATION  
KNOXVILLE ENVIRONMENTAL FIELD OFFICE

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January 17, 2017

Mr. John Mitchell, Operation Superintendent  
Anderson County Water Authority  
P.O. Box 70  
Clinton, Tennessee 37717

RE: Compliance Evaluation Inspection (CEI)  
ACWA Airbase STP  
NPDES permit #TN0074071  
Anderson County

Dear Mr. Mitchell:

On Tuesday January 10, 2017, Richard Lambert and Hassan Sanaat with the Division of Water Resources visited the ACWA Airbase STP in order to conduct a Compliance Evaluation Inspection (CEI) for NPDES permit #TN0074071. The Division appreciates Mr. Gary Sharp, a Certified Collection Grade II Operator, for providing information necessary to conduct this inspection and a tour of the wastewater treatment system. The plant operates under the supervision of Mr. Larry Clowers who is a Grade II certified plant operator. The following is a report containing findings of this inspection:

**Site Review**

ACWA Airbase STP is covered under NPDES permit #74071 to discharge treated domestic wastewater from Outfall 001 to Slatestone Creek at mile 1.5. The NPDES permit has been effective since December 1, 2013 and expires on December 2018. Airbase STP serves a community (Briceville) of about twenty (27) families, utilizing a re-circulating sand filter wastewater processing system. The re-circulating rate is 20% discharge and 80% return to the sand filter. Average design flow for this system is 0.01 MGD.

There have been no changes in the process since the last Compliance Evaluation Inspection in 2014. No septic odor could be detected throughout the plant as well as the neighborhood. No septic haulers have been discharging waste into the system. ACWA Airbase STP does not have any industrial pre-treaters discharging into the wastewater plant therefore there is no pre-treatment program. At the time of the inspection the plant was operational. The discharge water was clear with no distinctly visible floating scum, oil or other mater. The wastewater discharge does not cause any objectionable color contrast in the Slatestone Creek.

Still, there is no emergency power available to the plant. In case of power failure, influent wastewater flows into a large “overflow tank” which is located next to the septic tank. There is a Doppler flow meter installed to measure effluent discharge, but there is no flow meter to measure the influent.

### **Records and Reports**

The NPDES permit parameters Dissolved Oxygen (DO), pH, E.coli, Settleable Solids (SS), Carbonaceous Biological Oxygen Demand (CBOD), Total Suspended Solids (TSS), Ammonia-Nitrogen and pH are all analyzed in-house. A review of the Monthly Operation Reports (MOR's) for the last twelve months indicated one E.coli limit violation on August 2016 and no overflows or bypasses. The E.coli violation resulted from malfunctioning of a Ultraviolet (UV) bulb which was later replaced. The NPDES permit requires this facility to submit only MOR's and not Discharge Monitoring Reports (DMR's), therefore, the facility will not be able to join the NetDMR system. More than three years of records and reports were kept on site and were readily accessible.

### **Sludge Management**

Every five years sludge generated at the wastewater plant is pumped and sent to KUB, or Lake City Waterworks, or On-Site Environmental in Knoxville, Tennessee.

### **Laboratory and Self-Monitoring**

There is no toxicity test requirement for this wastewater treatment system. Hach Company calibrates all laboratory equipment. At the time of the inspection, the laboratory looked clean and orderly. Analyzed laboratory samples are disposed of in the laboratory sink, which enters the treatment facility.

Although the new requirements associated with the 2013 Method Update Rules (MUR's) were discussed with Mr. Gary Sharp during the 2014 inspection, there was no documentation available to verify the implantation of these rules. Since the 2014 inspection, the Airbase STP should have begun implementing the following components of the Method Update Rule:

- Demonstration of Capability
- Method Detection Limit
- Laboratory Fortified Blank
- Laboratory Fortified Matrix

All laboratory samples are collected by grab sampling and their analysis performed in-house by Mr. Gary Sharp. There is no need for an ISCO sampler because the NPDES permit requires grab sampling of the effluent parameters. Effluent CBOD tests are run on 80%, 90% and 100% dilutions. De-Ionized dilution water is purchased.

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Influent sampling and analysis is not required by NPDES permit. IDEX is used for E.coli testing. A HACH DR 3900 is utilized for ammonia analysis. A HACH HG-30 pH meter is used to measure pH, and a HACH HQ-44 is utilized to measure Dissolved Oxygen. A DMRQA was not requested by EPA. Twice a year effluent samples are sent to Microbac, a contract laboratory, to be analyzed for QA/QC purposes.

### **Collection System**

There have been no overflows reported in 2016. A Sanitary Sewer Overflow (SSO) inspection is going to be conducted a few days after the CEI.

### **Conclusion**

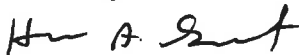
The Airbase STP has been in compliance with its NPDES effluent limits in 2016.

The Compliance Evaluation Inspection report dated August 11, 2014 brought to your attention that the operator has to walk down ten to fifteen unsafe steps on a disintegrated and un-railed wooden staircase in order to collect discharge samples at outfall 001. The August 11, 2014 report recommended that this staircase be fixed and railed for safety reasons. As of January 10, 2017, the day of this inspection, the safety recommendation has not yet been addressed.

Although Mr. Gary Sharp has attended the MUR training at the Fleming Training Center in Murfreesboro, Tennessee, the four basic components of this program (listed above) have not yet been implemented. The Airbase Sewage Treatment Plant needs to implement this program as soon as possible. We are again sending a copy of the Method Update Rule (MUR) requirements by e-mail.

Thank you for your cooperation. Should you have any comments or questions, please do not hesitate to call me at (865) 594-5591.

Sincerely,



Hassan A. Sanaat  
Division of Water Resources

Enclosure

cc: Enforcement and Compliance, DWR, Nashville



**4-zone sand filter**



**Outfall 001**



**Outfall sign and Slatestone Creek**



**Effluent Doppler flow meter**



**Septic tank**



**Slatestone Creek**